

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2005 ACS on STN

AN 2000:742091 CAPLUS Full-text

DN 133:305587

TI Methods and compositions using bifunctional hsp-binding derivatives for degradation and/or inhibition of HER-family tyrosine kinases and treatment of cancer

IN Rosen, Neal; Kuduk, Scott D.; Danishefsky, Samuel J.; Zheng, Furzhong F.; Sepp-Lorenzino, Laura; Ouerfelli, Ouathak

PA Sloan-Kettering Institute for Cancer Research, USA

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000061578	A1	20001019	WO 2000-US9512	20000407 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CA 2370007	AA	20001019	CA 2000-2370007	20000407
	EP 1169319	A1	20020109	EP 2000-921985	20000407
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	AU 769235	B2	20040122	AU 2000-42235	20000407
	US 2002045570	A1	20020418	US 2001-960665	20010921
PRAI	US 1999-128593P	P	19990409		
	WO 2000-US9512	W	20000407		

AB Bifunctional mols. comprising two hsp-binding moieties which bind to hsp90 in the pocket to which ansamycin antibiotics bind connected via a linker are effective for inducing the degradation and/or inhibition of HER-family tyrosine kinases. For example, a compound of two geldanamycin moieties joined by a four-carbon linker provides selective degradation of HER-family tyrosine kinases, without substantially affecting other kinases. These compds. can be used for treatment of HER-pos. cancers with reduced toxicity, since these compds. potently kill cancer cells but affect fewer proteins than geldanamycin. Compound preparation is described.

IT **80449-02-1**, Tyrosine kinase

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)

(HER-family; bifunctional hsp-binding derivative for degradation and/or inhibition of HER-family tyrosine kinase and cancer treatment)

RN 80449-02-1 CAPLUS

CN Kinase (phosphorylating), protein (tyrosine) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **30562-34-6**, Geldanamycin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

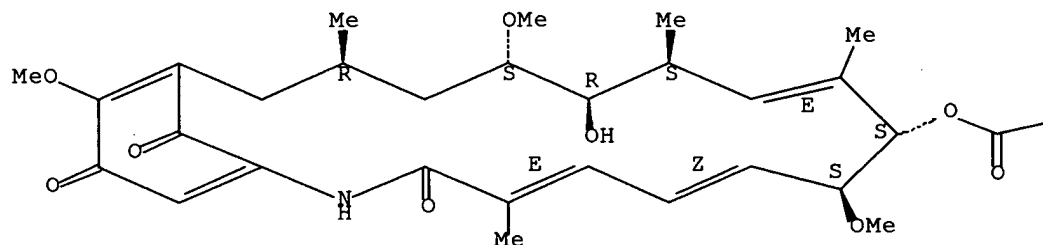
(bifunctional hsp-binding derivative for degradation and/or inhibition of HER-family tyrosine kinase and cancer treatment)

RN 30562-34-6 CAPLUS

CN Geldanamycin (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).
Double bond geometry as described by E or Z.

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—NH₂

IT 71975-67-2P 280145-12-2P 280145-13-3P
280145-14-4P 280145-15-5P 280145-16-6P
280145-17-7P 280145-18-8P 301643-24-3P
301643-25-4P 301643-26-5P 301643-27-6P
301643-28-7P 301643-29-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

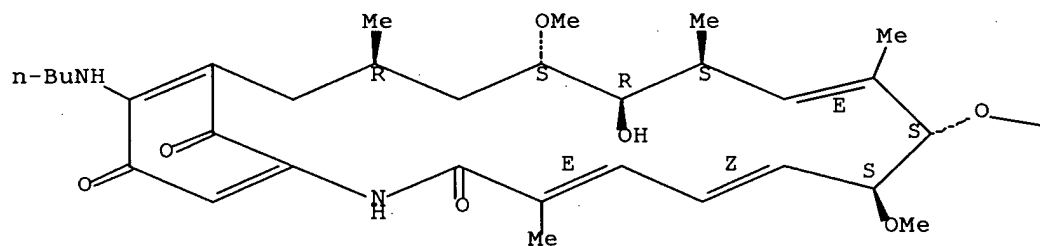
(bifunctional hsp-binding derivative for degradation and/or inhibition of HER-family tyrosine kinase and cancer treatment)

RN 71975-67-2 CAPLUS

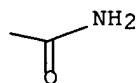
CN Geldanamycin, 17-(butylamino)-17-demethoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.
Double bond geometry as described by E or Z.

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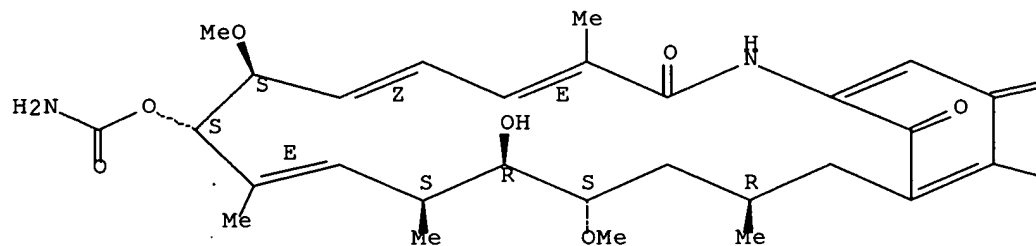
RN 280145-12-2 CAPLUS

CN Geldanamycin, 17,17'-(1,4-butanediylldiimino)bis[17-demethoxy- (9CI) (CA
INDEX NAME)

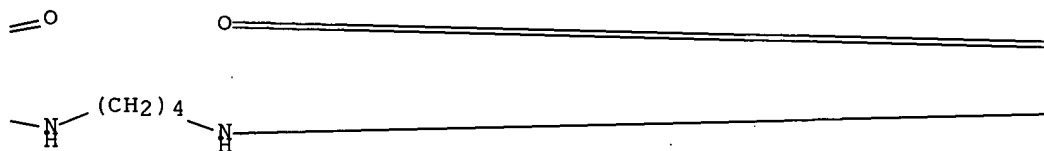
Absolute stereochemistry.

Double bond geometry as described by E or Z.

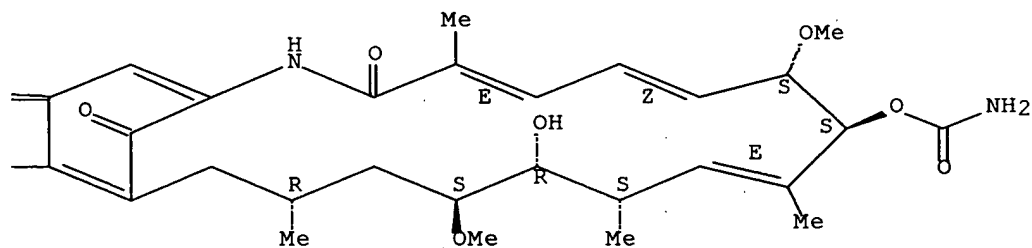
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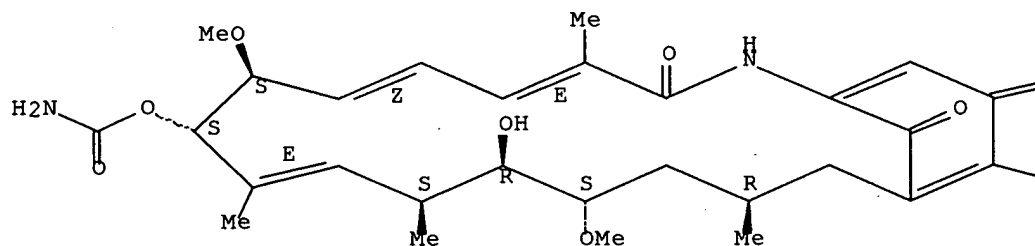
RN 280145-13-3 CAPLUS

CN Geldanamycin, 17,17'-(1,7-heptanediyl-diimino)bis[17-demethoxy- (9CI) (CA
INDEX NAME)

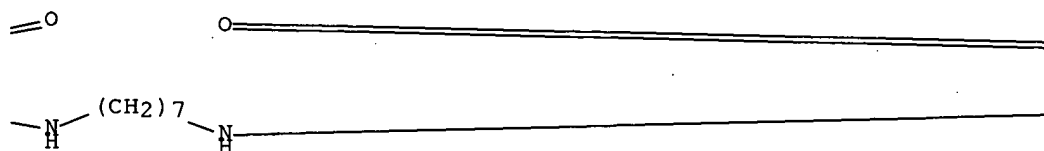
Absolute stereochemistry.

Double bond geometry as described by E or Z.

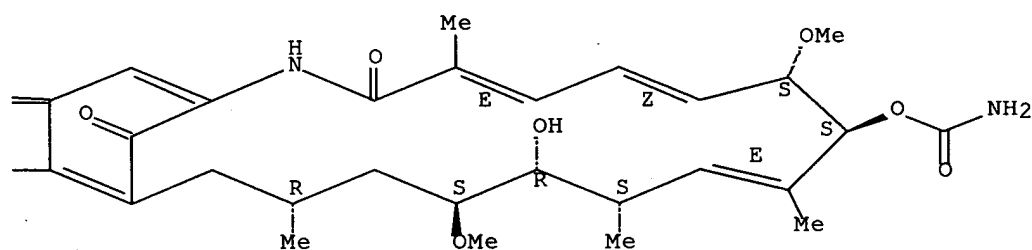
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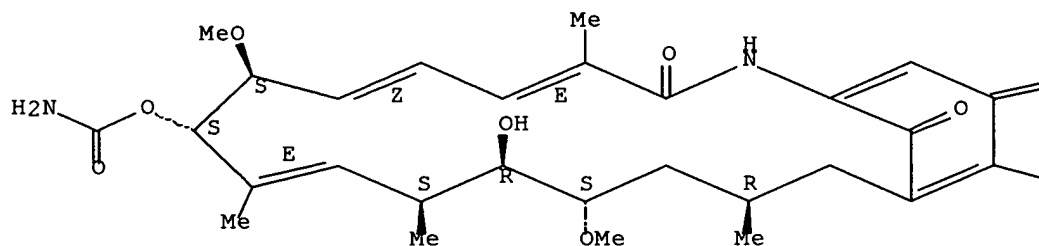
RN 280145-14-4 CAPLUS

CN Geldanamycin, 17,17'-(1,9-nonanediylldiimino)bis[17-demethoxy- (9CI) (CA INDEX NAME)]

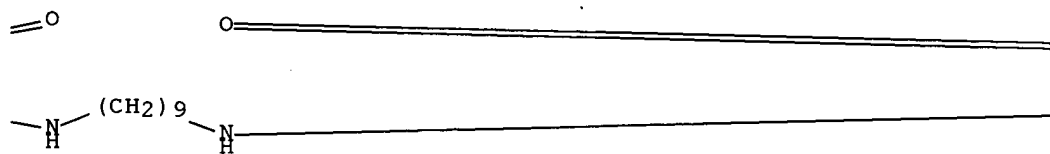
Absolute stereochemistry.

Double bond geometry as described by E or Z.

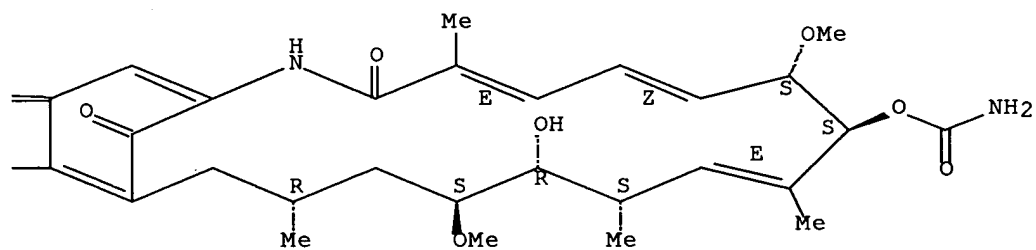
PAGE 1-A



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CN	Geldanamycin, 17,17'-(1,11-undecanediyldiimino)bis[17-demethoxy- (9CI) (CA INDEX NAME)
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Double bond geometry as described by E or Z.

The chemical structure shows a complex molecule with a long chain. Key features include:

- A thioether bridge (S) connecting a side chain to a fused ring system.
- Multiple stereocenters indicated by wedges and dashes, including a chiral center with a hydroxyl group (OH) and a methoxy group (OMe).
- A fused ring system on the right, possibly a cyclohexadiene derivative.
- Various functional groups including a thioether (S), a ketone (C=O), and an amine (NH).

$$\begin{array}{c} \text{=O} \\ | \\ \text{---N---(CH}_2\text{)}_{11}\text{---N---} \\ | \qquad \qquad | \\ \text{H} \qquad \qquad \text{H} \end{array}$$

The chemical structure shows a cyclohexenone ring on the left, connected via an amide linkage to a chain containing a thioether bridge. The chain includes several stereocenters marked with 'R' and 'S' configurations, and various functional groups including a methyl group, a hydroxyl group, and a terminal amide group. The thioether bridge is labeled with 'E' and 'Z' configurations. The structure is highly complex and appears to be a derivative of a natural product.

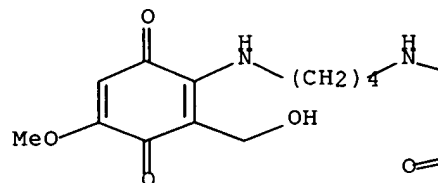
RN 280145-16-6 CAPLUS

CN Geldanamycin, 17-demethoxy-17-[[4-[[2-(hydroxymethyl)-4-methoxy-3,6-dioxo-1,4-cyclohexadien-1-yl]amino]butyl]amino]- (9CI) (CA INDEX NAME)

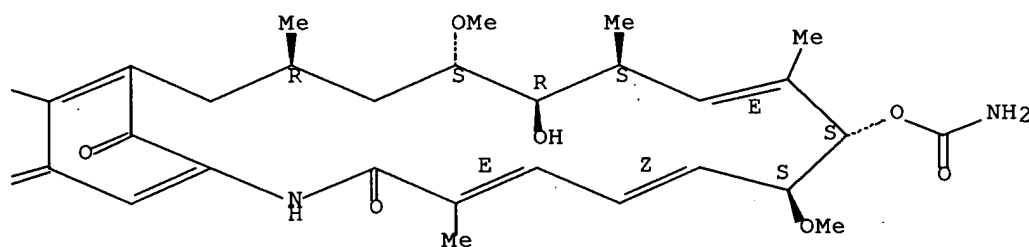
Absolute stereochemistry.

Double bond geometry as described by E or Z.

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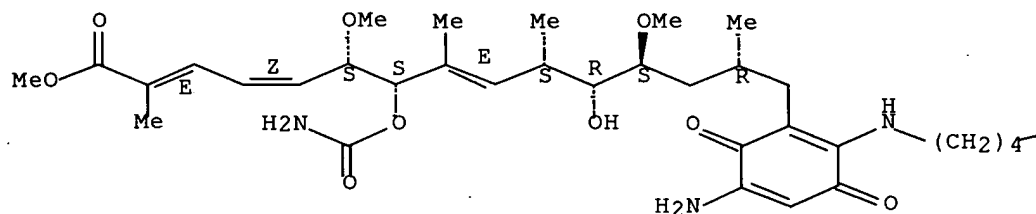
RN 280145-17-7 CAPLUS

CN Geldanamycin, 17-[[4-[[4-amino-2-[(2R,4S,5R,6S,7E,9S,10S,11Z,13E)-9-[(aminocarbonyl)oxy]-5-hydroxy-4,10,15-trimethoxy-2,6,8,14-tetramethyl-15-oxo-7,11,13-pentadecatrienyl]-3,6-dioxo-1,4-cyclohexadien-1-yl]amino]butyl]amino]-17-demethoxy- (9CI) (CA INDEX NAME)

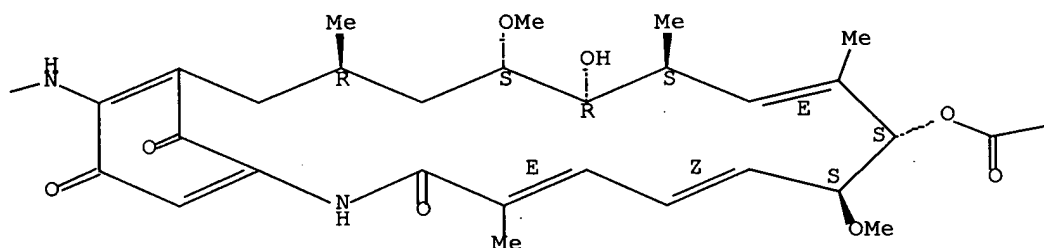
Absolute stereochemistry.

Double bond geometry as described by E or Z.

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NH₂

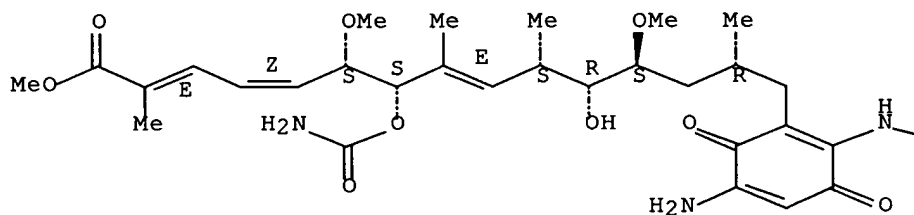
RN 280145-18-8 CAPLUS

CN 2,4,8-Pentadecatrienoic acid, 15,15'-[1,4-butanediylbis[imino(5-amino-3,6-dioxo-1,4-cyclohexadiene-2,1-diyl)]]bis[7-[(aminocarbonyl)oxy]-11-hydroxy-6,12-dimethoxy-2,8,10,14-tetramethyl-, dimethyl ester,
(2E,2'E,4Z,4'Z,6S,6'S,7S,7'S,8E,8'E,10S,10'S,11R,11'R,12S,12'S,14R,14'R)-(9CI) (CA INDEX NAME)

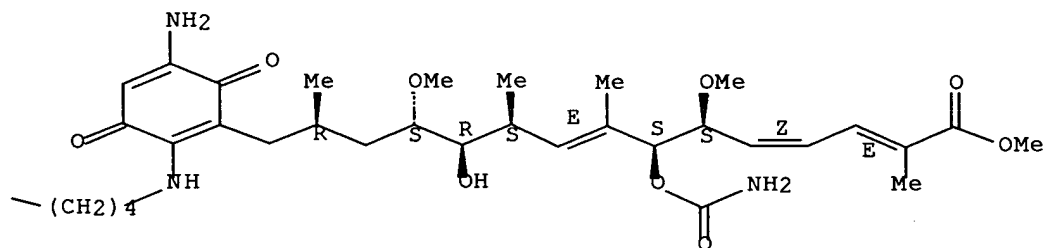
Absolute stereochemistry.

Double bond geometry as shown.

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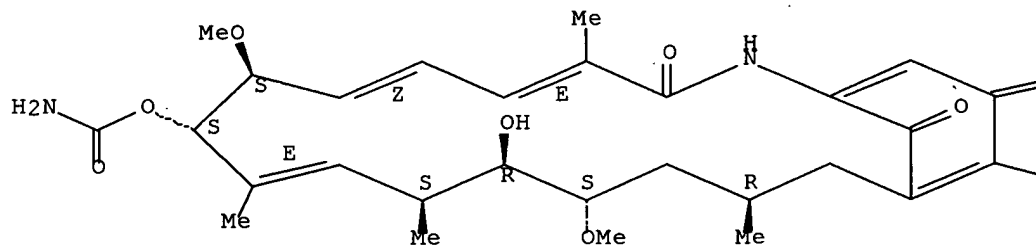
RN 301643-24-3 CAPLUS

CN Geldanamycin, 17,17'-(1,12-dodecanediylldiimino)bis[17-demethoxy- (9CI)
(CA INDEX NAME)

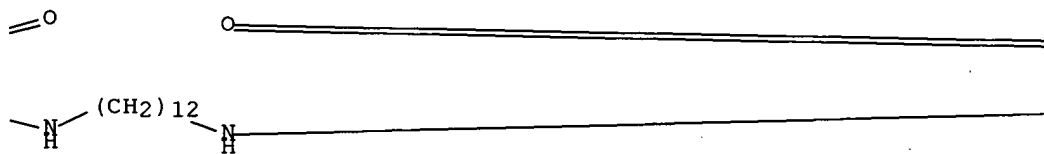
Absolute stereochemistry.

Double bond geometry as described by E or Z.

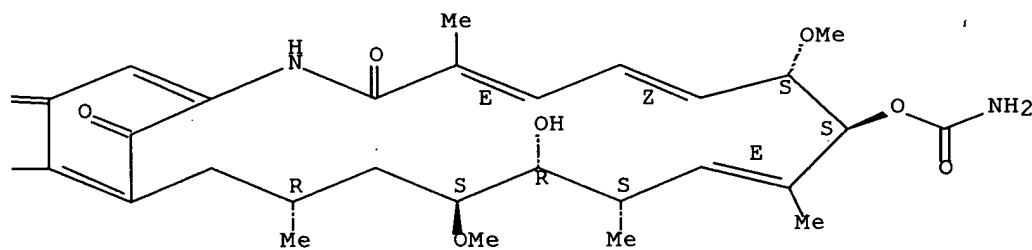
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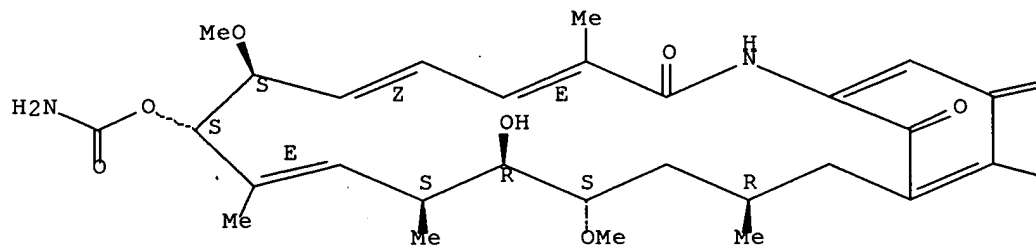
RN 301643-25-4 CAPLUS

CN Geldanamycin, 17,17'-(1,5-pentanediyldiimino)bis[17-demethoxy- (9CI) (CA
INDEX NAME)

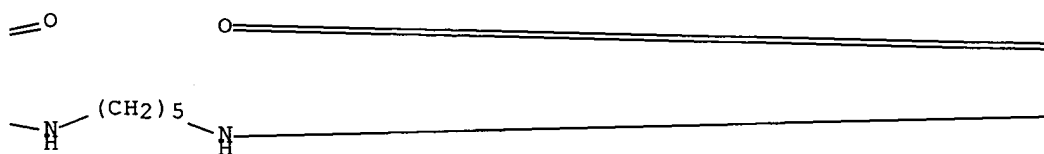
Absolute stereochemistry.

Double bond geometry as described by E or Z.

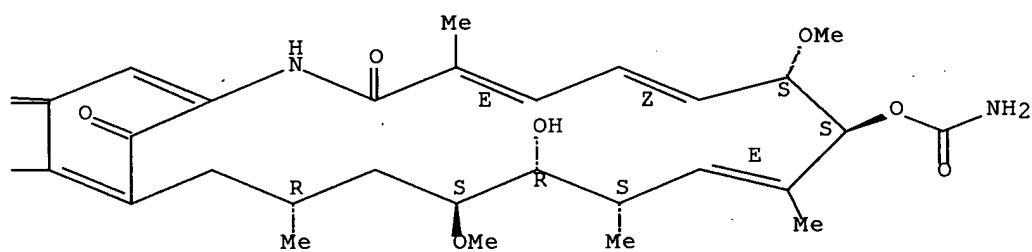
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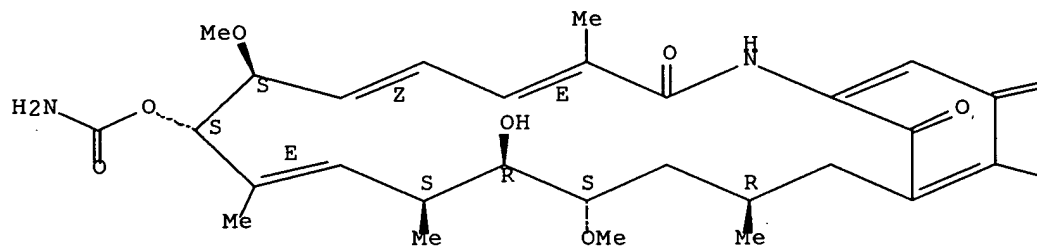
RN 301643-26-5 CAPLUS

CN Geldanamycin, 17,17'-(1,6-hexanediyl-diimino)bis[17-demethoxy- (9CI) (CA INDEX NAME)]

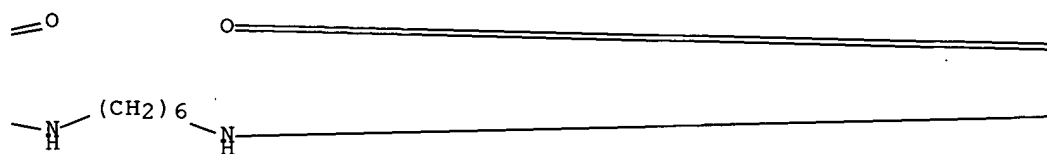
Absolute stereochemistry.

Double bond geometry as described by E or Z.

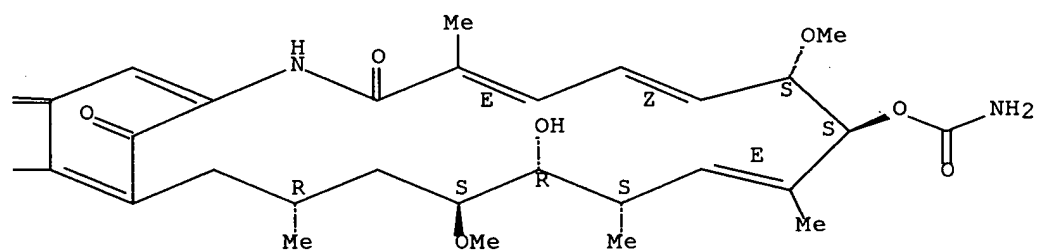
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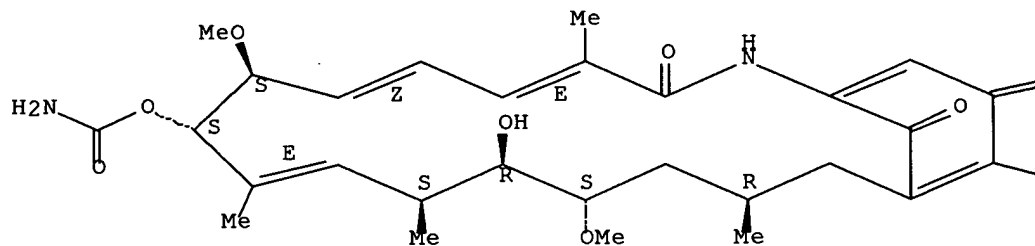
RN 301643-27-6 CAPLUS

CN Geldanamycin, 17,17'-(1,8-octanediylldiimino)bis[17-demethoxy- (9CI) (CA
INDEX NAME)

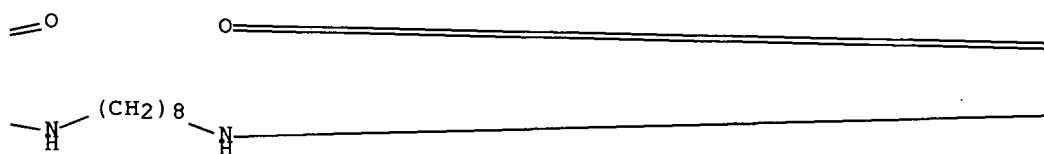
Absolute stereochemistry.

Double bond geometry as described by E or Z.

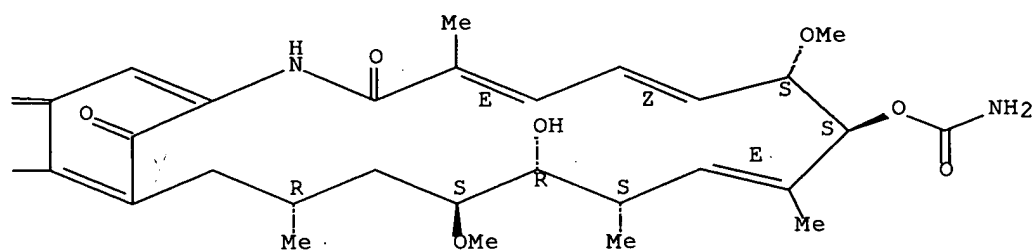
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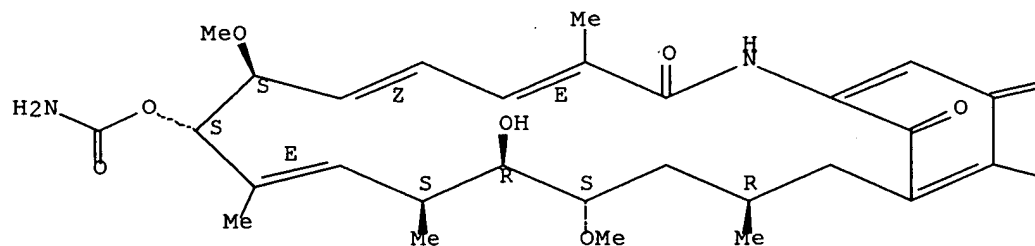
RN 301643-28-7 CAPLUS

CN Geldanamycin, 17,17'-(1,10-decanediylldiimino)bis[17-demethoxy- (9CI) (CA
INDEX NAME)

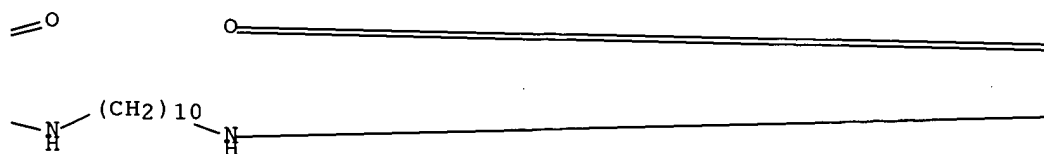
Absolute stereochemistry.

Double bond geometry as described by E or Z.

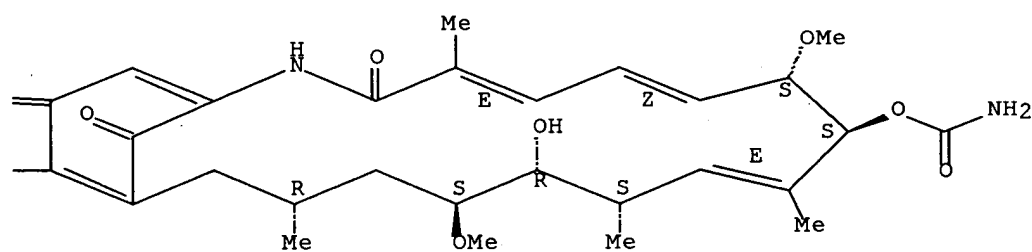
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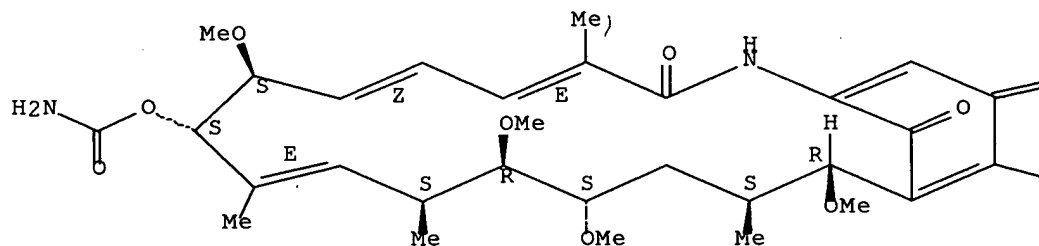
RN 301643-29-8 CAPLUS

CN Geldanamycin, 17,17'-(1,6-hexanediyl-diimino)bis[17-demethoxy-,
15-methoxy-11-O-methyl deriv., (15R)- (9CI) (CA INDEX NAME)

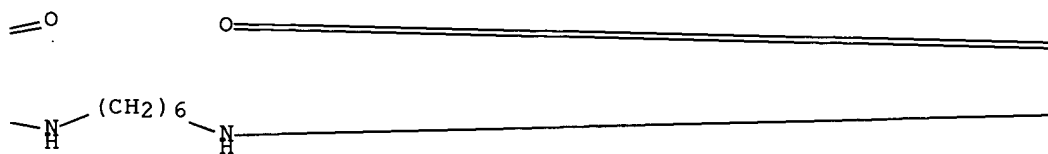
Absolute stereochemistry.

Double bond geometry as described by E or Z.

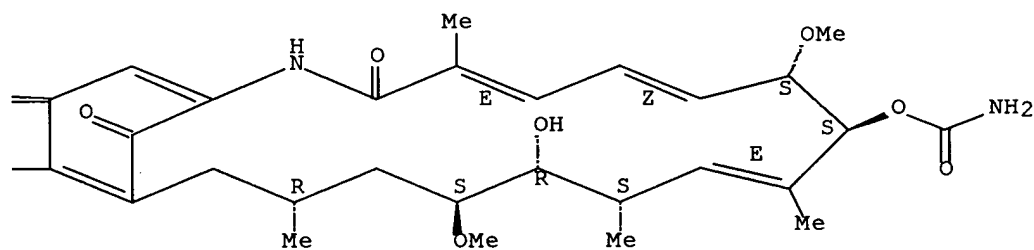
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IT 30562-34-6D, Geldanamycin, linked derivs.

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses) (bifunctional hsp-binding derivative for degradation and/or inhibition of HER-family tyrosine kinase and cancer treatment)

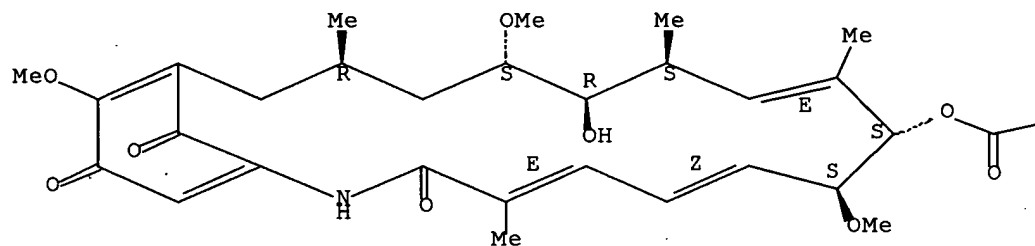
RN 30562-34-6 CAPLUS

CN Geldanamycin (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

Double bond geometry as described by E or Z.

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NH₂

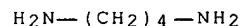
IT 137632-09-8, HER-2 kinase 139691-76-2, Raf-1 kinase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
(Biological study); PROC (Process)
(bifunctional hsp-binding derivative for degradation and/or inhibition of
HER-family tyrosine kinase and cancer treatment)
RN 137632-09-8 CAPLUS
CN Kinase (phosphorylating), protein p185neu (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

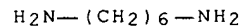
RN 139691-76-2 CAPLUS
CN Kinase (phosphorylating), gene raf-1 protein (9CI) (CA INDEX NAME)

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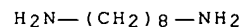
IT 110-60-1, 1,4-Butanediamine 124-09-4, 1,6-Hexanediamine,
reactions 373-44-4, 1,8-Octanediamine 462-94-2,
1,5-Pentanediamine 646-19-5, 1,7-Heptanediamine 646-24-2
, 1,9-Nonanediamine 646-25-3, 1,10-Decanediamine
822-08-2, 1,11-Undecanediamine 2783-17-7,
1,12-Dodecanediamine 70563-58-5, Herbimycin A
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; bifunctional hsp-binding derivative for degradation and/or
inhibition of HER-family tyrosine kinase and cancer treatment)
RN 110-60-1 CAPLUS
CN 1,4-Butanediamine (8CI, 9CI) (CA INDEX NAME)



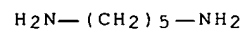
RN 124-09-4 CAPLUS
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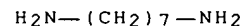
RN 373-44-4 CAPLUS
CN 1,8-Octanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)



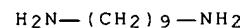
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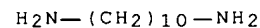
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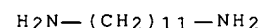
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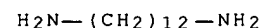
RN 646-25-3 CAPLUS
CN 1,10-Decanediamine (6CI, 8CI, 9CI) (CA INDEX NAME)



RN 822-08-2 CAPLUS
CN 1,11-Undecanediamine (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



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CN 1,12-Dodecanediamine (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



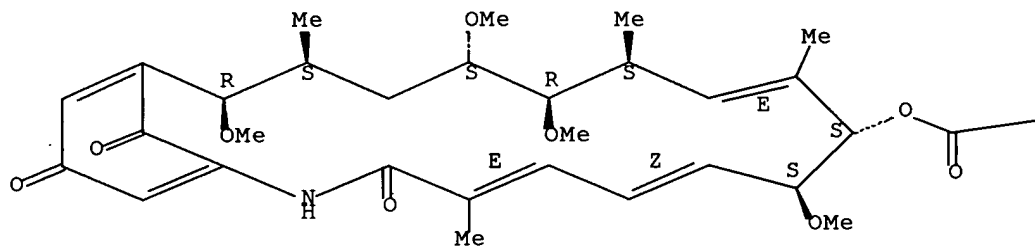
RN 70563-58-5 CAPLUS

CN Geldanamycin, 17-demethoxy-15-methoxy-11-O-methyl-, (15R)- (9CI) (CA
INDEX NAME)

Absolute stereochemistry. Rotation (+).

Double bond geometry as described by E or Z.

PAGE 1-A



PAGE 1-B

—NH₂

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT